at least one sensor for recognizing a poor visibility condition, the at least one sensor including at least one sensor for detecting a visual range in a vicinity of the vehicle using reflection measurement,

wherein, in response to the poor visibility condition, the distance control device increases the setpoint time gap determined for normal visibility.

6. (New) The device according to claim 5, wherein the at least one sensor further includes at least one sensor for detecting a road condition one of optically and by radar, the road condition including whether the road is wet or covered with snow.

A1

7. (New) The device according to claim 5, wherein the at least one sensor further includes at least one sensor for detecting a brightness of the surroundings using at least one photodiode.

8. (New) The device according to claim 5, wherein the distance control device increases the setpoint time gap during the poor visibility condition by 20 to 30% compared to normal visibility.

Remarks

This Preliminary Amendment cancels without prejudice original claims 1-4 and substitute claims 1-4 in the underlying PCT Application No. PCT/DE00/02585, and adds without prejudice new claims 5-8. The new claims conform the claims to U.S. Patent and Trademark Office rules and do not add new matter to the application.

In accordance with 37 C.F.R. § 1.121(b)(3), the Substitute Specification (including the Abstract, but without the claims) contains no new matter. The amendments reflected in the Substitute Specification (including Abstract) are to conform the Specification and Abstract to U.S. Patent and Trademark Office rules or to correct informalities. As required by 37 C.F.R. § 1.121(b)(3)(iii) and § 1.125(b)(2), a Marked Up Version Of The Substitute Specification comparing the Specification of record and the Substitute Specification also accompanies this Preliminary Amendment. Approval and entry of the Substitute Specification (including Abstract) is respectfully requested.

The underlying PCT Application No. PCT/DE00/02585 includes an International Search Report, dated November 22, 2000. The Search Report includes a list of

documents that were uncovered in the underlying PCT Application. A copy of the Search Report accompanies this Preliminary Amendment.

The underlying PCT Application No. PCT/DE00/02585 also includes an International Preliminary Examination Report, dated November 14, 2001, a copy of which is included, including a translation.

Applicants assert that the subject matter of the present application is new, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

Respectfully Submitted,

KENYON & KENYON

Dated: 3/11/02

By: Reg No 35,952

By: _____

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[10191/2290]

DEVICE FOR CONTROLLING DISTANCE

[Background Information] Field Of The Invention

The present invention relates to a device for controlling distance for a motor vehicle, the device observing a setpoint distance or a setpoint time gap with respect to a vehicle driving ahead as a function of the traveling speed, and the distance control taking a minimum distance or a minimum time gap, specifiable by the driver, into consideration when determining the setpoint distance or the setpoint time gap.

Background Information

A [Such a] distance control for motor vehicles is [known from the] described in German Patent No. 44 37 678 [A1]. It describes the distance control system known as an ACC system (adaptive cruise control system). In that case, the distance and/or the relative speed with respect to the motor vehicle driving ahead is usually determined by a measuring device operating according to the radar or laser principle. With this information about the distance or the relative speed, the speed of one's own vehicle is controlled by an intervention in the drive and/or the brake of the vehicle in such a way that the distance to the vehicle driving ahead corresponds to a predefined setpoint distance. Instead of the setpoint distance, the variable equivalent thereto, namely, a setpoint time gap between the two vehicles following one another, can also be regulated.

Usually, the setpoint distance corresponds to a defined speed-dependent safety distance. However, a fixedly defined safety distance or a definitively predefined setpoint time gap is often not compatible with the personal driving style of a driver. Thus, sporty drivers will more likely prefer a smaller distance to the vehicle driving ahead, while a driver having a steadier driving style will want to follow a preceding vehicle at a greater safety distance. In order to take the driver's wish into account, according to [DE] German Patent No. 44 37 678 [A1], the possibility is given to the

driver to set a minimum distance or a minimum time gap desired by him/her via an operating control element. This stipulation by the driver is taken into account during the determination of the setpoint distance or the setpoint time gap by the adaptive cruise control system. According to the related art, when ascertaining the setpoint distance or the setpoint time gap in view of the driver's wish, no differentiation is made as to whether visibility is good or poor.

Given poor visibility, i.e. during bad weather and/or when it is dark, the driver perceives a given distance to a preceding vehicle to be shorter than in the case of normal visibility as prevails during the day and under good weather conditions. Therefore, [the] an object of the present invention is to take the different distance impression of the driver, depending upon whether good or poor visibility prevails, into account when the setpoint distance or the setpoint time gap is determined by the distance control.

Summary [of the] Of The Invention

The indicated objective is achieved [by the features of Claim 1] in that, in response to poor visibility, the distance control increases the setpoint distance or the setpoint time gap ascertained for normal visibility. Namely, the driver then no longer perceives the setpoint distance (setpoint time gap) set by the distance control, taking into account the driver's wish, to be smaller compared to the setpoint distance (setpoint time gap) during good visibility.

[Advantageous further developments of the present invention come to light from the dependent claims.]

Accordingly, to recognize poor visibility, sensors are provided which detect indications of bad weather and/or darkness. Among these are preferably sensors which, for example, detect the visual range, the road condition, the windshield wiper activity, the switching on of fog lights, precipitation (rain, snow, fog), the brightness

of the surroundings, the switching on of headlights.

Preferably, the distance control increases the setpoint time gap during poor visibility by 20 to 30% compared to normal visibility.

[Description of an Exemplary Embodiment] Brief Description Of The Drawings

[The present invention is explained in detail below in terms of the] The Figure shows a block diagram[, shown in the drawing,] of a distance control for motor vehicles.

Detailed Description

The distance control system (adaptive cruise control system) for a motor vehicle, shown in the [figure] Figure as a block diagram, contains a generally known device, based on the laser or radar principle, for measuring the distance or the relative speed of one's own vehicle compared to a vehicle driving ahead. This device AR regulates the traveling speed of the vehicle by intervention in the engine drive and/or the brake so that the distance or the time gap with respect to the preceding vehicle corresponds to a setpoint distance or a setpoint time gap. The setpoint distance or the setpoint time gap is ascertained in a block SW and supplied to device AR.

In circuit block SW, the setpoint distance is ascertained as a function of the instantaneous speed of the vehicle. The greater the vehicular speed, the greater the setpoint distance must be with respect to a vehicle driving ahead. If one considers the time gap between the two vehicles - that is, the distance between the instant at which the preceding vehicle passes a specific location, and the instant at which one's own vehicle reaches the same location - then this is a constant quantity independent of the traveling speed. The setpoint distance or the setpoint time gap is selected such that, in the event of an extreme braking by the preceding vehicle, sufficient distance or time reserve remains for the rear vehicle for a braking reaction, so that a pile-up does not occur.

MARKED-UP VERSION OF SUBSTITUTE SPECIFICATION

The intention is now to take the personal driving style (sporty or reserved) of the driver into account in the stipulation of the setpoint distance or setpoint time gap, as well. Therefore, an operating control element is made available to the driver with which he/she is able to specify a minimum distance or a minimum time gap adapted to his/her driving style. Block FW in the drawing clarifies the stipulation of a minimum distance or a minimum time gap which is considered in block SW when ascertaining the setpoint distance or the setpoint time gap.

It is true for every driver that when visibility is poor, e.g. during bad weather or when it is dark, the driver perceives a given setpoint distance to be shorter than he/she would if visibility were good. In order to counteract this deceptive sensory perception, the setpoint distance or the setpoint time gap is increased in response to poor visibility. The setpoint distance or the setpoint time gap may be raised in one step, or raised adaptively according to the degree of visibility. That is to say, the poorer the visibility, the more sharply the setpoint distance or the setpoint time gap is increased in relation to values of the setpoint distance or the setpoint time gap when the visual range is good. For this reason, a unit ES is provided which recognizes the instantaneous visibility and transmits the information about it to circuit block SW for determining the setpoint distance or the setpoint time gap.

To detect the visibility, a plurality of sensors S1 through S8 are provided, whose output signals are received by unit ES, and it derives information about the visibility by, for example, interconnections and threshold decisions of the individual sensor signals. For example, the group of sensors S1 through S5 detects those conditions which suggest impairment of visibility because of bad weather. Among these conditions are, for example:

- the visual range, which may be acquired, for example, by reflection measurements in the vicinity in front of the vehicle;
- the road condition, it being detected, e.g. optically or by radar, whether the road is wet or covered with snow;

- the windshield wiper activity;
- the switching on of fog lights.

Sensors S6 through S8 are preferably of the type which are able to recognize darkness. Suitable for this purpose are sensors which, for example
- measure the brightness of the surroundings (using photodiodes);
- detect the circuit state of the headlights.

As equation (1) conveys, altered setpoint time gap SZ* may be formed by a percentage increase of setpoint time gap SZ as it is calculated for good visibility. In this context, parameter ISW describes the visibility on the basis of the weather; during good weather, parameter ISW is 0, and in bad weather, is 1. Parameter [IB] ID describes the visibility on the basis of the brightness; in sunshine, parameter ID is 0, and in darkness, is 1. Factors X1 and Y1 are applicable and lie in the order of magnitude of 10 to 20%.

$$SZ^* = SZ \cdot (1 + XI \cdot ISW + YI \cdot ID) \qquad (1)$$

Altered setpoint time gap SZ* may also result according to equation (2) from a constant increase of visual range SZ in response to good visibility.

$$SZ^* = SZ + X2 \cdot ISW + Y2 \cdot ID \qquad (2)$$

Factors X2 and [Y23] Y2 are applicable and lie in an order of magnitude between 0.1 and 0.3 seconds.

Analogous to equations (1) and (2), new setpoint distance SA* may also be formed from a percentage increase of setpoint distance SA in the case of good visibility according to equation (3), or by a constant enlargement of setpoint distance SA according to equation (4). Factors X3 and Y3 in equation (3) are applicable

parameters in the order of magnitude of 3 to 5 m/s, and factors X4 and Y4 in equation (4) are applicable parameters in the order of magnitude of 5 to 10 m/s. The instantaneous vehicular speed is designated by v.

$$SA^* = SA\ (1 + X3 \cdot ISW/v + Y3 \cdot ID/v) \qquad (3)$$

$$SA^* = SA + X4 \cdot ISW/v + Y4 \cdot ID/v \qquad (4)$$

To counteract the deceptive impression of distance for the driver during poor visibility, it is sufficient if the distance control increases the setpoint time gap during poor visibility by 20 to 30% compared to normal visibility. Altered values SZ* and SA* for the setpoint time gap and the setpoint distance, respectively, are thus rather slight, so that in the event the visibility is not detected accurately, no negative effect results for the distance control.

Abstract Of The Disclosure

The device ascertains a setpoint distance or a setpoint time gap with respect to a vehicle driving ahead as a function of the traveling speed, the distance control taking a minimum distance or a minimum time gap, specifiable by the driver, into consideration when determining the setpoint distance or the setpoint time gap. Since the driver's impression of distance is dependent on the visibility at the moment, in response to poor visibility (bad weather, darkness), the distance control increases the setpoint distance or the setpoint time gap ascertained for normal visibility.

MARKED-UP VERSION OF SUBSTITUTE SPECIFICATION

[10191/2290]

DEVICE FOR CONTROLLING DISTANCE

Field Of The Invention

The present invention relates to a device for controlling distance for a motor vehicle, the device observing a setpoint distance or a setpoint time gap with respect to a vehicle driving ahead as a function of the traveling speed, and the distance control taking a minimum distance or a minimum time gap, specifiable by the driver, into consideration when determining the setpoint distance or the setpoint time gap.

Background Information

A distance control for motor vehicles is described in German Patent No. 44 37 678. It describes the distance control system known as an ACC system (adaptive cruise control system). In that case, the distance and/or the relative speed with respect to the motor vehicle driving ahead is usually determined by a measuring device operating according to the radar or laser principle. With this information about the distance or the relative speed, the speed of one's own vehicle is controlled by an intervention in the drive and/or the brake of the vehicle in such a way that the distance to the vehicle driving ahead corresponds to a predefined setpoint distance. Instead of the setpoint distance, the variable equivalent thereto, namely, a setpoint time gap between the two vehicles following one another, can also be regulated.

Usually, the setpoint distance corresponds to a defined speed-dependent safety distance. However, a fixedly defined safety distance or a definitively predefined setpoint time gap is often not compatible with the personal driving style of a driver. Thus, sporty drivers will more likely prefer a smaller distance to the vehicle driving ahead, while a driver having a steadier driving style will want to follow a preceding vehicle at a greater safety distance. In order to take the driver's wish into account, according to German Patent No. 44 37 678, the possibility is given to the driver to set a minimum distance or a minimum time gap desired by him/her via an operating

control element. This stipulation by the driver is taken into account during the determination of the setpoint distance or the setpoint time gap by the adaptive cruise control system. According to the related art, when ascertaining the setpoint distance or the setpoint time gap in view of the driver's wish, no differentiation is made as to whether visibility is good or poor.

Given poor visibility, i.e. during bad weather and/or when it is dark, the driver perceives a given distance to a preceding vehicle to be shorter than in the case of normal visibility as prevails during the day and under good weather conditions. Therefore, an object of the present invention is to take the different distance impression of the driver, depending upon whether good or poor visibility prevails, into account when the setpoint distance or the setpoint time gap is determined by the distance control.

Summary Of The Invention

The indicated objective is achieved in that, in response to poor visibility, the distance control increases the setpoint distance or the setpoint time gap ascertained for normal visibility. Namely, the driver then no longer perceives the setpoint distance (setpoint time gap) set by the distance control, taking into account the driver's wish, to be smaller compared to the setpoint distance (setpoint time gap) during good visibility.

Accordingly, to recognize poor visibility, sensors are provided which detect indications of bad weather and/or darkness. Among these are preferably sensors which, for example, detect the visual range, the road condition, the windshield wiper activity, the switching on of fog lights, precipitation (rain, snow, fog), the brightness of the surroundings, the switching on of headlights.

Preferably, the distance control increases the setpoint time gap during poor visibility by 20 to 30% compared to normal visibility.

Brief Description Of The Drawings

The Figure shows a block diagram of a distance control for motor vehicles.

Detailed Description

The distance control system (adaptive cruise control system) for a motor vehicle, shown in the Figure as a block diagram, contains a generally known device, based on the laser or radar principle, for measuring the distance or the relative speed of one's own vehicle compared to a vehicle driving ahead. This device AR regulates the traveling speed of the vehicle by intervention in the engine drive and/or the brake so that the distance or the time gap with respect to the preceding vehicle corresponds to a setpoint distance or a setpoint time gap. The setpoint distance or the setpoint time gap is ascertained in a block SW and supplied to device AR.

In circuit block SW, the setpoint distance is ascertained as a function of the instantaneous speed of the vehicle. The greater the vehicular speed, the greater the setpoint distance must be with respect to a vehicle driving ahead. If one considers the time gap between the two vehicles - that is, the distance between the instant at which the preceding vehicle passes a specific location, and the instant at which one's own vehicle reaches the same location - then this is a constant quantity independent of the traveling speed. The setpoint distance or the setpoint time gap is selected such that, in the event of an extreme braking by the preceding vehicle, sufficient distance or time reserve remains for the rear vehicle for a braking reaction, so that a pile-up does not occur.

The intention is now to take the personal driving style (sporty or reserved) of the driver into account in the stipulation of the setpoint distance or setpoint time gap, as well. Therefore, an operating control element is made available to the driver with which he/she is able to specify a minimum distance or a minimum time gap adapted to his/her driving style. Block FW in the drawing clarifies the stipulation of a minimum

distance or a minimum time gap which is considered in block SW when ascertaining the setpoint distance or the setpoint time gap.

It is true for every driver that when visibility is poor, e.g. during bad weather or when it is dark, the driver perceives a given setpoint distance to be shorter than he/she would if visibility were good. In order to counteract this deceptive sensory perception, the setpoint distance or the setpoint time gap is increased in response to poor visibility. The setpoint distance or the setpoint time gap may be raised in one step, or raised adaptively according to the degree of visibility. That is to say, the poorer the visibility, the more sharply the setpoint distance or the setpoint time gap is increased in relation to values of the setpoint distance or the setpoint time gap when the visual range is good. For this reason, a unit ES is provided which recognizes the instantaneous visibility and transmits the information about it to circuit block SW for determining the setpoint distance or the setpoint time gap.

To detect the visibility, a plurality of sensors S1 through S8 are provided, whose output signals are received by unit ES, and it derives information about the visibility by, for example, interconnections and threshold decisions of the individual sensor signals. For example, the group of sensors S1 through S5 detects those conditions which suggest impairment of visibility because of bad weather. Among these conditions are, for example:

- the visual range, which may be acquired, for example, by reflection measurements in the vicinity in front of the vehicle;
- the road condition, it being detected, e.g. optically or by radar, whether the road is wet or covered with snow;
- the windshield wiper activity;
- the switching on of fog lights.

Sensors S6 through S8 are preferably of the type which are able to recognize darkness. Suitable for this purpose are sensors which, for example

- measure the brightness of the surroundings (using photodiodes);
- detect the circuit state of the headlights.

As equation (1) conveys, altered setpoint time gap SZ* may be formed by a percentage increase of setpoint time gap SZ as it is calculated for good visibility. In this context, parameter ISW describes the visibility on the basis of the weather; during good weather, parameter ISW is 0, and in bad weather, is 1. Parameter ID describes the visibility on the basis of the brightness; in sunshine, parameter ID is 0, and in darkness, is 1. Factors X1 and Y1 are applicable and lie in the order of magnitude of 10 to 20%.

$$SZ^* = SZ \cdot (1 + XI \cdot ISW + YI \cdot ID) \qquad (1)$$

Altered setpoint time gap SZ* may also result according to equation (2) from a constant increase of visual range SZ in response to good visibility.

$$SZ^* = SZ + X2 \cdot ISW + Y2 \cdot ID \qquad (2)$$

Factors X2 and Y2 are applicable and lie in an order of magnitude between 0.1 and 0.3 seconds.

Analogous to equations (1) and (2), new setpoint distance SA* may also be formed from a percentage increase of setpoint distance SA in the case of good visibility according to equation (3), or by a constant enlargement of setpoint distance SA according to equation (4). Factors X3 and Y3 in equation (3) are applicable parameters in the order of magnitude of 3 to 5 m/s, and factors X4 and Y4 in equation (4) are applicable parameters in the order of magnitude of 5 to 10 m/s. The instantaneous vehicular speed is designated by v.

$$SA^* = SA\ (1 + X3 \cdot ISW/v + Y3 \cdot ID/v) \qquad (3)$$

$$SA^* = SA + X4 \cdot ISW/v + Y4 \cdot ID/v \qquad (4)$$

To counteract the deceptive impression of distance for the driver during poor visibility, it is sufficient if the distance control increases the setpoint time gap during poor visibility by 20 to 30% compared to normal visibility. Altered values SZ* and SA* for the setpoint time gap and the setpoint distance, respectively, are thus rather slight, so that in the event the visibility is not detected accurately, no negative effect results for the distance control.

What is claimed is:

1. A device for controlling distance for a motor vehicle, the device observing a setpoint distance or a setpoint time gap with respect to a vehicle driving ahead as a function of the traveling speed, and the distance control taking a minimum distance or a minimum time gap, specifiable by the driver, into consideration when determining the setpoint distance or the setpoint time gap,
wherein in response to poor visibility, the distance control increases the setpoint distance or the setpoint time gap ascertained for normal visibility.

2. The device as recited in Claim 1,
wherein to detect poor visibility, sensors (S1, ..., S8) are provided which detect indications for bad weather and/or darkness.

3. The device as recited in Claim 2,
wherein the sensors (S1, ..., S8) detect one or more of the following conditions:
- visual range
- road condition
- windshield wiper activity
- switching on of fog lights
- rain, snow, fog
- brightness of the surroundings
- switching on of headlights.

4. The device as recited in Claim 1,
wherein the distance control increases the setpoint time gap during poor visibility by 20 to 30% compared to normal visibility.

Abstract Of The Disclosure

The device ascertains a setpoint distance or a setpoint time gap with respect to a vehicle driving ahead as a function of the traveling speed, the distance control taking a minimum distance or a minimum time gap, specifiable by the driver, into consideration when determining the setpoint distance or the setpoint time gap. Since the driver's impression of distance is dependent on the visibility at the moment, in response to poor visibility (bad weather, darkness), the distance control increases the setpoint distance or the setpoint time gap ascertained for normal visibility.

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
US Department of Commerce
United States Patent and Trademark Office, PCT
2011 South Clark Place Room CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 17 May 2001 (17.05.01)	
International application No. PCT/DE00/02585	**Applicant's or agent's file reference** R. 36153 Ti/Kat
International filing date (day/month/year) 03 August 2000 (03.08.00)	**Priority date** (day/month/year) 11 September 1999 (11.09.99)
Applicant WINNER, Hermann et al	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

09 February 2001 (09.02.01)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO **34, chemin des Colombettes** **1211 Geneva 20, Switzerland**	Authorized officer R. Forax
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

Form PCT/IB/331 (July 1992)

DE0002585

INTERNATIONAL SEARCH REPORT

International Application No
PCT/DE 00/02585

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01S13/93

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 44 37 678 A (TELEFUNKEN MICROELECTRON) 2 May 1996 (1996-05-02) cited in the application the whole document	1-4
Y	US 5 865 265 A (MATSUMOTO YOSHIYUKI) 2 February 1999 (1999-02-02) column 1, line 60 -column 2, line 23 column 3, line 1 -column 4, line 11 column 4, line 62 -column 6, line 9 column 9, line 36 -column 10, line 30 figures 7,8	1-4
A	EP 0 637 525 A (BAYERISCHE MOTOREN WERKE AG) 8 February 1995 (1995-02-08) the whole document	1-4

-/--

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 November 2000	22/11/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Roost, J

Form PCT/ISA/210 (second sheet) (July 1992)

EL546613079

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 42 09 047 C (DAIMLER-BENZ AG) 26 August 1993 (1993-08-26) the whole document	1-4

INTERNATIONALER RECHERCHENBERICHT

Internationales Aktenzeichen
[redacted]DE 00/02585

A. KLASSIFIZIERUNG DES ANMELDUNGSGEGENSTANDES
IPK 7 G01S13/93

Nach der Internationalen Patentklassifikation (IPK) oder nach der nationalen Klassifikation und der IPK

B. RECHERCHIERTE GEBIETE

Recherchierter Mindestprüfstoff (Klassifikationssystem und Klassifikationssymbole)
IPK 7 G01S

Recherchierte aber nicht zum Mindestprüfstoff gehörende Veröffentlichungen, soweit diese unter die recherchierten Gebiete fallen

Während der internationalen Recherche konsultierte elektronische Datenbank (Name der Datenbank und evtl. verwendete Suchbegriffe)
EPO-Internal, WPI Data, INSPEC

C. ALS WESENTLICH ANGESEHENE UNTERLAGEN

Kategorie°	Bezeichnung der Veröffentlichung, soweit erforderlich unter Angabe der in Betracht kommenden Teile	Betr. Anspruch Nr.
Y	DE 44 37 678 A (TELEFUNKEN MICROELECTRON) 2. Mai 1996 (1996-05-02) in der Anmeldung erwähnt das ganze Dokument ---	1-4
Y	US 5 865 265 A (MATSUMOTO YOSHIYUKI) 2. Februar 1999 (1999-02-02) Spalte 1, Zeile 60 -Spalte 2, Zeile 23 Spalte 3, Zeile 1 -Spalte 4, Zeile 11 Spalte 4, Zeile 62 -Spalte 6, Zeile 9 Spalte 9, Zeile 36 -Spalte 10, Zeile 30 Abbildungen 7,8 ---	1-4
A	EP 0 637 525 A (BAYERISCHE MOTOREN WERKE AG) 8. Februar 1995 (1995-02-08) das ganze Dokument ---	1-4

-/--

[X] Weitere Veröffentlichungen sind der Fortsetzung von Feld C zu entnehmen

[X] Siehe Anhang Patentfamilie

° Besondere Kategorien von angegebenen Veröffentlichungen :
"A" Veröffentlichung, die den allgemeinen Stand der Technik definiert, aber nicht als besonders bedeutsam anzusehen ist
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"Y" Veröffentlichung von besonderer Bedeutung; die beanspruchte Erfindung kann nicht als auf erfinderischer Tätigkeit beruhend betrachtet werden, wenn die Veröffentlichung mit einer oder mehreren anderen Veröffentlichungen dieser Kategorie in Verbindung gebracht wird und diese Verbindung für einen Fachmann naheliegend ist
"&" Veröffentlichung, die Mitglied derselben Patentfamilie ist

Datum des Abschlusses der internationalen Recherche	Absendedatum des internationalen Recherchenberichts
15. November 2000	22/11/2000

Name und Postanschrift der Internationalen Recherchenbehörde	Bevollmächtigter Bediensteter
Europäisches Patentamt, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Roost, J

2

Formblatt PCT/ISA/210 (Blatt 2) (Juli 1992)

INTERNATIONALER RECHERCHENBERICHT

Internationales Aktenzeichen
[redacted]/DE 00/02585

C.(Fortsetzung) ALS WESENTLICH ANGESEHENE UNTERLAGEN

Kategorie°	Bezeichnung der Veröffentlichung, soweit erforderlich unter Angabe der in Betracht kommenden Teile	Betr. Anspruch Nr.
A	DE 42 09 047 C (DAIMLER-BENZ AG) 26. August 1993 (1993-08-26) das ganze Dokument -----	1-4

2

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Information on patent family members

International Application No
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